

**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Currently Amended) A processing device comprising:  
a chamber;  
gas supply means which is connected to said chamber and supplies one process gas in a plurality of process gases into said chamber for a predetermined time;  
first exhaust means which is connected to said chamber and creates a predetermined vacuum pressure in said chamber;

second exhaust means which is connected to said first exhaust means and creates a pressure in said chamber at which said first exhaust means is operable;

measuring means which is arranged between said first exhaust means and said second exhaust means and measures an amount of said process gas in an exhaust gas exhausted from said chamber; and

control means which controls supply of another process gas by said gas supply means based on the amount of said process gas measured by said measuring means;

wherein said control means starts supplying another process gas into said chamber by said gas supply means when the amount of said process gas in said exhaust gas is reduced to a predetermined amount.

7. (Canceled)

8. (Currently Amended) A processing device comprising:

a chamber in which a predetermined process is performed on a process target;

cleaning means which cleans inside said chamber by supplying a cleaning gas for purifying inside said chamber;

first exhaust means which is connected to said chamber and creates a predetermined vacuum pressure in said chamber;

second exhaust means which is connected to said first exhaust means and

creates a pressure in said chamber at which said first exhaust means is operable;

information acquisition means which is arranged between said first exhaust means and said second exhaust means and acquires information about a pollutant in an exhaust gas exhausted from said chamber; and

control means which discriminates a pollution status inside said chamber based on said information acquired by said information acquisition means and controls said cleaning means;

wherein said pollutant is particles and said control means cleans inside said chamber when an amount of said particles in said exhaust gas becomes equal to or greater than a predetermined amount.

9. (Canceled)

10. (Currently Amended) The process ~~system~~ device according to claim [[9]] 8, wherein said information acquisition means has an optical counter which measures the amount of particles in said exhaust gas.

11. (Currently Amended) The process ~~system~~ device according to claim [[6 or 9]] 8, wherein said information acquisition means further has byproduct measuring means which measures an amount of a byproduct produced by said cleaning in said exhaust gas, and

said control means controls said cleaning means based on the amount of

said byproduct measured by said byproduct measuring means.

12. (Currently Amended) The process ~~system~~ device according to claim [[6]] 8, wherein said information acquisition means has a mass spectrometry device which measures a type and an amount of a metal element in said exhaust gas, and said control means controls said cleaning means based on the type and amount of the metal element measured by said information acquisition means.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Currently Amended) A method comprising:  
supplying one process gas in a plurality of process gases into a chamber retaining a process target inside for a predetermined time;  
causing a main exhaust section connected to said chamber to create a predetermined vacuum pressure in said chamber;  
causing a sub exhaust section connected to said main exhaust section to

create a pressure in said chamber at which pumping in said first exhaust step is possible;

measuring an amount of said process gas in an exhaust gas exhausted from said chamber in said first exhaust step and flowing between said main exhaust section and said sub exhaust section; and

controlling supply of another process gas in said gas supply step based on the amount of said process gas measured in said measuring step;

wherein supply of said another process gas into said chamber starts when the amount of said one process gas in said exhaust gas is reduced to a predetermined amount.

18. (Currently Amended) A method comprising:

performing a predetermined process in a chamber retaining a process target inside;

cleaning inside said chamber by supplying a cleaning gas for purifying inside said chamber;

causing a main exhaust section connected to said chamber to create a predetermined vacuum pressure in said chamber[[, and]];

causing a sub exhaust section connected to said main exhaust section to create a pressure at which pumping in said first exhaust step is possible;

acquiring information about a pollutant in an exhaust gas exhausted from said chamber in said first exhaust step and flowing between exhaust gas

exhausted from said chamber in said first exhaust step and flowing between said main exhaust section and said sub exhaust section; and

discriminating a pollution status inside said chamber and controlling cleaning in said chamber in said cleaning step based on said information acquired in said information acquisition step;

wherein said pollutant is particles and inside said chamber is cleaned when an amount of said particles in said exhaust gas becomes equal to or greater than a predetermined amount.

19. (Currently Amended) The processing device according to claim [[1, 6, or]] 8, wherein said first exhaust means is a turbo molecular pump and said second exhaust means is a dry pump.

20. (Canceled)

21. (Currently Amended) The method according to claim [[13, 14,]] 17[[,]] or 18, wherein said first exhaust section is a turbo molecular pump and said second exhaust section is a dry pump.

22. (New) The processing device according to claim 6, wherein:  
a first exhaust pipe is arranged between said chamber and said first exhaust means;

a second exhaust pipe is arranged between said first exhaust means and said second exhaust means;

said second exhaust pipe has a diameter smaller than that of said first exhaust pipe; and

said measuring means measures an amount of said one process gas flowing in said second exhaust pipe.

23. (New) The processing device according to claim 22, wherein said second exhaust pipe has a measurement pipe which is branched from said second exhaust pipe and bypasses said exhaust gas and said measuring means measures said exhaust gas flowing in said measurement pipe.

24. (New) The processing device according to claim 23, wherein said measurement pipe has a diameter equal to that of said second exhaust pipe.

25. (New) The processing device according to claim 6, wherein said measuring means is selected from the group consisting of a Fourier transform infrared spectroscopic device, a mass spectrometry device, and a concentration meter.

26. (New) The method according to claim 17, wherein:

a first exhaust pipe is arranged between said chamber and said first exhaust means;

a second exhaust pipe is arranged between said first exhaust means and said second exhaust means;

said second exhaust pipe has a diameter smaller than that of said first exhaust pipe; and

an amount of said one process gas flowing in said second exhaust pipe is measured in said measuring step.

27. (New) The method according to claim 26, wherein said second exhaust pipe has a measurement pipe which is branched from said second exhaust pipe and bypasses said exhaust gas and an amount of said one process gas flowing in said measurement pipe is measured in said measuring step.

28. (New) The method according to claim 27, wherein said measurement pipe has a diameter equal to that of said second exhaust pipe.

29. (New) The method according to claim 17, wherein an amount of said one process gas is measured by a Fourier transform infrared spectroscopic device, a mass spectrometry device, or a concentration meter in said measuring step.